Update on Water Supply Strategy Implementation

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Water Forward 2018 Supply Strategies

Recommended Strategies	Average/ Drought	Estimated Yield (Acre Feet per Year)[1]			
		2020	2040	2070	2115
Water Supply Strategies					
Aquifer Storage and Recovery	Drought	-	60,000	60,000	90,000
Brackish Groundwater Desalination	Both	-	-	5,000	16,000
Direct Non-Potable Reuse (Centralized Reclaimed Water System)	Both	500	12,000	25,000	54,600
Indirect Potable Reuse (IPR) through Lady Bird Lake	Drought	-	11,000	20,000	20,000
Capture Local Inflows to Lady Bird Lake (infrastructure also included as part of IPR, above)	Average	-	3,000	3,000	3,000
Off Channel Reservoir	Both	-	-	25,000	25,000
Distributed Wastewater Reuse	Both	-	3,150	14,470	30,050
Sewer Mining	Both	-	1,000	2,210	5,280
Community Scale Stormwater Harvesting	Both	-	160	240	500
Drought Supply Strategies	-	-	71,000	80,000	110,000
Average/Both Supply Strategies	-	500	19,310	74,910	134,440
Water Supply Strategies Sub-Total	-	500	90,310	154,910	244,440

Emergency Indirect Potable Reuse Update

What is Indirect Potable Reuse (IPR)?

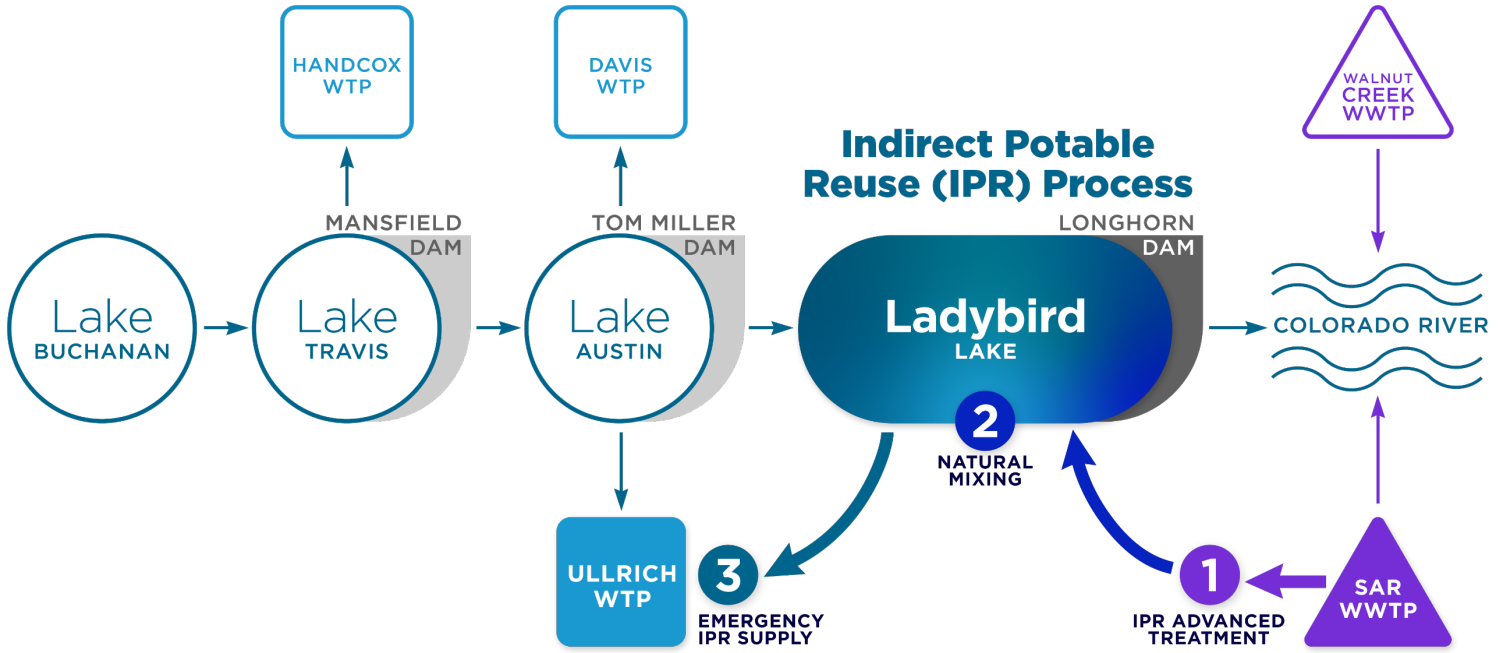
- The use of reclaimed water for potable purposes by discharging to a water supply source, such as surface water or groundwater. The mixed reclaimed and natural waters then receive additional treatment at a water treatment plant before entering the drinking water distribution system.

What is Indirect Potable Reuse (IPR)?

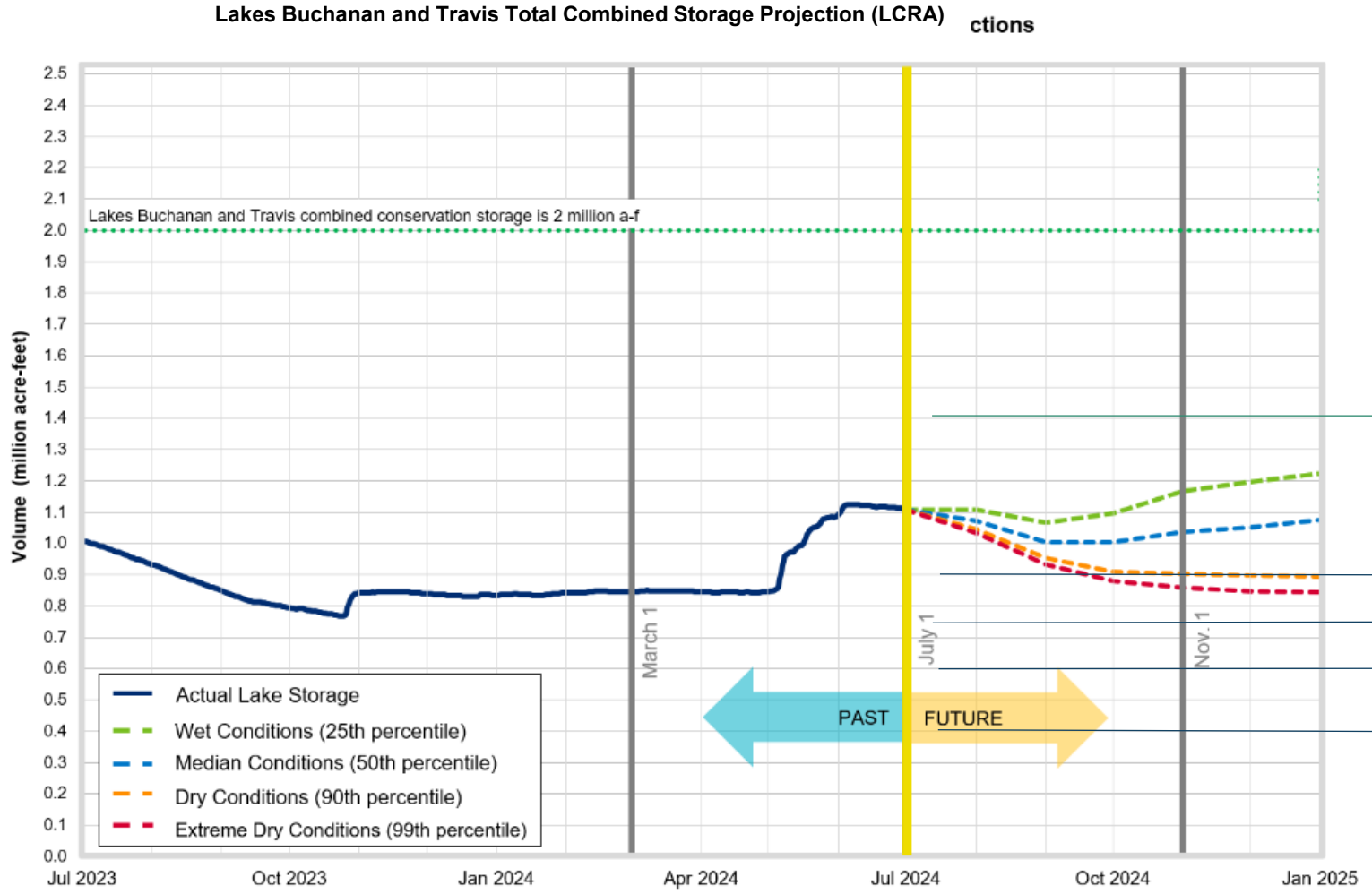
- There are five indirect potable reuse operating facilities in Texas:
  - El Paso Water Utilities - recharging the Hueco Bolson Aquifer since 1985.
  - North Texas Municipal Water District - polishing water using wetlands and augmenting the Lavon Lake since 2009.
  - Tarrant Regional Water District - polishing water using wetlands and augmenting the Richland Reservoir.
  - The City of Abilene - augmenting Lake Fort Phantom Hill since 2015.
  - The City of Wichita Falls - augmenting Lake Arrowhead since 2017.

How Would AW Implement Indirect Potable Reuse (IPR)?

- IPR is an emergency water supply strategy included in the 2018 Water Forward plan
- The strategy would use Lady Bird Lake as an environmental buffer and convey highly treated WWTP effluent to Ullrich WTP for use in supplementing drinking water supplies



Drought Triggers



City of Austin Drought Triggers

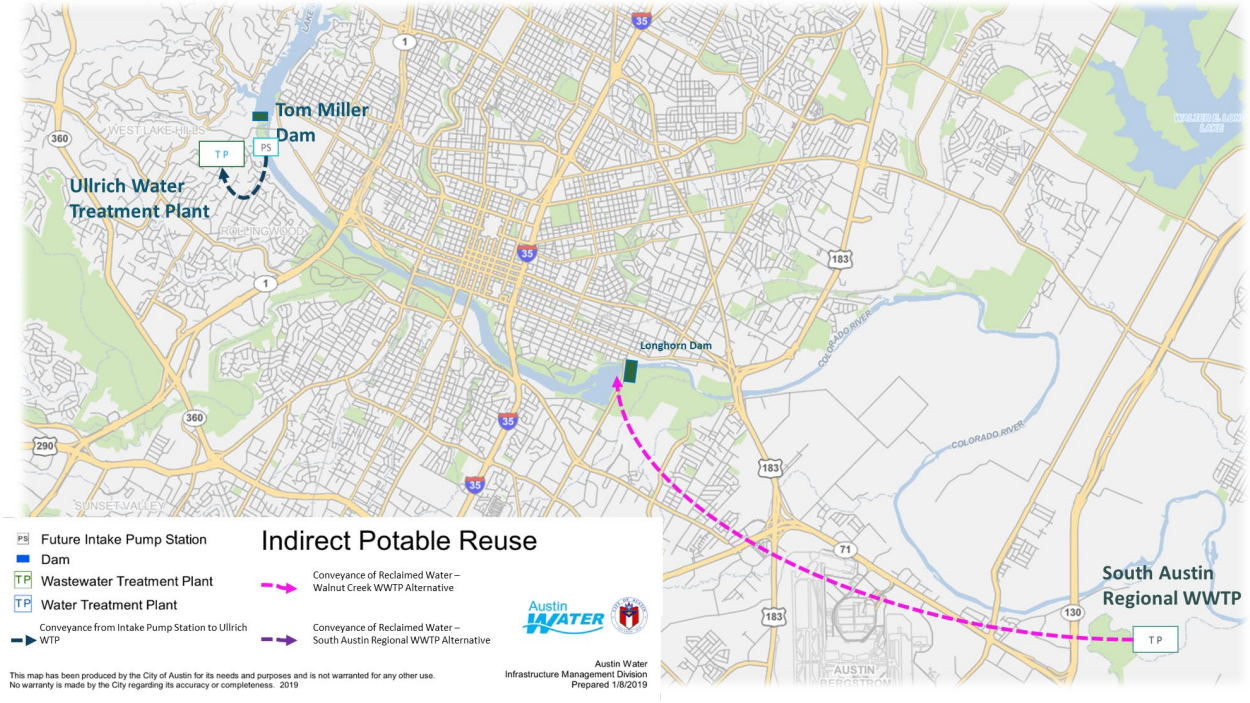
- DCP Stage 1 — 1.4 MAF
- DCP Stage 2 — 0.9 MAF
- DCP Stage 3 — 0.75 MAF
- DCP Stage 4 — 0.6 MAF
- IPR Operational Trigger — 0.4 MAF

Progress Update

- AW Internal IPR Task Force progressing on project tasks
  - Includes Operations, Engineering, Systems Planning, PIO, and Government Relations staff and key executives
- Decision on water supply source has been made
- Staff have developed scopes for further rotation list consultant services to support project components and is moving forward on consultant procurement

Water Supply Source

- SAR has been selected as source of treated effluent for emergency IPR implementation
- Current plan is to construct and separately permit sidestream IPR treatment facilities to further treat effluent



Planned Consultant Support

Rotation List Engineering Support

- Schematic design, design criteria, technical specifications for:
  - Intake and pump station facilities
  - Reclaimed transmission main
  - Sidestream wastewater effluent treatment facilities

Design Build Project

- Full IPR project design and construction

Timeline

Fall 2024
Development of schematic design, design criteria, technical specifications

Winter 2024/2025
Begin design-build procurement process

~Summer 2025
Pending Council approval, issue design-build contract

~2028
Target for substantial completion of IPR project construction

Questions?

Austin WATER

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